

REMARKS

Claims 1-8 are pending in the application. Claims 1-8 stand rejected. Claims 1 and 7 are independent claim.

Claims 1 and 5, 6, and 8 have been amended to further clarify each claim and/or to change the language of the claim to structural language.

Claims 9-14 are added. Claims 9-11 are fully supported by FIG. 2, whereas claims 12-14 are fully supported by FIG. 4.

Claim 8 stands objected for allegedly depending on a wrong independent claim. In response, the Applicant amends claim 8 to depend on claim 7. The Applicant respectfully requests removal of the objection.

Claim 1 stands rejected under 35 U.S.C §103(a) as allegedly being obvious over Hidenori *et al.* (J.P. Pub. 11-087815) (“Hidenori”) in view of Kim (or Kyong) *et al.* (J.P. Pub. 08-162697) (“Kim”) and further in view of Inada *et al.* (U.S. 6,920,261) (“Inada”).

Claim 1 recites an optical source generator comprising “a plurality of wavelength-dependent reflectors, each **connected to one of the respective demultiplexing ports of the wavelength-division multiplexer/demultiplexer**...; a plurality of optical fiber amplifiers, each having two sides, **one side of which being connected to one of the associated wavelength-dependent reflectors**...; a plurality of wavelength-independent reflectors, **each being connected to the other side of one of the respective optical fiber amplifiers**.”

The Applicant respectfully submits that the optical source generator of claim 1 comprises, among others, a wavelength-division multiplexer/demultiplexer, a plurality of wavelength-dependent reflectors, a plurality of optical fiber amplifiers, and a plurality of wavelength-independent reflectors. In addition, the optical source generator is configured such

that each wavelength-dependent reflectors contained in the optical source generator **is connected to the demultiplexing port** of the wavelength-division multiplexer/demultiplexer; each optical fiber amplifier has a first end **connected to the corresponding wavelength-dependent reflector**; and each wavelength-independent reflector is **connected to the second end of the optical fiber amplifiers** (see also FIG. 2).

To reject a claim under section 103, the United States Court of Appeals for the Federal Circuit required a showing of **an unrebutted prima facie case of obviousness** (*In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998)). According to United States Court of Customs and Patent Appeals, the predecessor to the Federal Circuit, the *prima facie* case can be established only if the prior art references, among others, **teach all features in the claims** (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1970); see also MPEP 2143.03). Therefore, to establish that an apparatus claim reciting components and their configuration is *prima facie* obvious, the references, alone or in combination, **must teach the components recited in the claim and their configuration** (id.).

Hidenori, as read by the Applicant, teaches, at most, a multiplexer/demultiplexer 12 and a plurality of reflection elements 18-1 – 18-n, where each reflection element is connected to the demultiplexing port of the multiplexer/demultiplexer 12 (FIG. 1).

Kim (or Kyong) teaches, at most, a plurality of optical fiber amplifiers or a plurality of optical fiber amplifiers where each fiber amplifier is connected to multi-branch optical fiber coupler (1xN) at one end and connected to an isolator at the other end (FIG. 1). However, nowhere does Kim (or Kyong) disclose a reflecting element or plurality of reflecting elements. As such, Kim (or Kyong) cannot possibly teach a plurality of optical fiber amplifiers where each amplifier contains a side that is connected to a reflecting element.

Inada, meanwhile, teaches, at most, a plurality of Faraday mirrors 5 where each Faraday mirror 5 is connected to an Arrayed Waveguide Grating (AWG) 3 (FIG. 1). However, nowhere does Inada teach a plurality of optical fiber amplifiers. Accordingly, Inada cannot possibly teach a plurality of reflecting elements connected to an optical fiber amplifier.

Accordingly, the combination of Hidenori, Kim (or Kyong), and Inada, at best, teaches a multiplexer/demultiplexer 12 and a plurality of reflection elements 18-1 – 18-n, where each reflection element is connected to the demultiplexing port of the multiplexer/demultiplexer 12; a plurality of optical fiber amplifiers; and a plurality of Faraday mirrors 5. The combination, however, does not teach the optical source generator having the **configuration** of claim 1, particularly an optical source generator comprising “a plurality of **wavelength-dependent reflectors**, each **connected to one of the respective demultiplexing ports of the wavelength-division multiplexer/demultiplexer**...; a plurality of **optical fiber amplifiers**, each having two sides, **one side of which being connected to one of the associated wavelength-dependent reflectors**...; a plurality of **wavelength-independent reflectors**, **each being connected to the other side of one of the respective optical fiber amplifiers**,” as recited in claim 1.

Therefore, the combination of Hidenori, Kim (or Kyong), and Inada, alone or in combination, do not teach all features of claim 1 or render claim 1 obvious. The Applicant respectfully requests withdrawal of the rejection.

Claim 7 stands rejected under 35 U.S.C §103(a) as allegedly being obvious over Hidenori in view of Kim (or Kyong) and further in view of Inada and Caplan (U.S. Pub. 2002/0167721).

Claim 7 recites an optical source generator comprising, *inter alia*, “an optical band pass filter [being] **interposed between the first plurality of wavelength-independent reflectors and the wavelength-independent reflectors other than the first plurality of wavelength-**

independent reflectors.”

As shown in FIG. 4, the optical source generator of claim 7 contains an optical band pass filter 90 that is interposed between the first plurality of wavelength-independent reflectors 60 and the wavelength-independent reflector 100 other than the first plurality of wavelength-independent reflectors 60.

In rejecting claim 7, the Office Action acknowledges that Hidenori, Kim (or Kyong), and Inada, alone or in combination, fails to teach the optical band pass filter. However, the Office Action indicates that claim 7 is not patentable as Caplan teaches a loss insensitive region 600 that contains an optical band pass filter (the present Office Action, page 11-12).

The Applicant respectfully submits that none of Hidenori, Kim (or Kyong), and Inada teaches an optical band pass filter, as acknowledged by the Office Action. As such, Hidenori, Kim (or Kyong), and Inada, alone or in combination, cannot possibly contain an optical band pass filter that is interposed between the first plurality of wavelength-independent reflectors and the wavelength-independent reflector other than the first plurality of wavelength-independent reflectors.

Caplan, as read by the Applicant, discloses an apparatus for stabilizing a high-gain high-power single polarization EDFA, where the apparatus comprises a loss insensitive region containing a band pass filter (FIG. 6). However, nowhere in Caplan is there a disclosure that the band pass filter allegedly contained in the loss insensitive region 600 is interposed between a first plurality of wavelength-independent reflectors and another wavelength-independent reflector other than the first plurality of wavelength-independent reflectors.

As such, Caplan also fail to an optical source generator comprising, *inter alia*, “an optical band pass filter [being] **interposed between the first plurality of wavelength-independent**

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reflectors and the wavelength-independent reflectors other than the first plurality of wavelength-independent reflectors,” as recited in claim 7.


As Hidenori, Kim (or Kyong), Inada, and Caplan, alone or in combination, do not teach all features of claim 7, the references, alone or in combination, do not render claim 7 obvious. The Applicant respectfully requests withdrawal of the rejection.

Other claims in this application are each dependent on the independent claims 1 and 7 and believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,

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